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STRATEGY RESEARCH PROJECT

## DOMESTIC BIOLOGICAL COUNTER-TERRORISM POLICY ARE WE DOING ENOUGH?

BY

LIEUTENANT COLONEL WILLIAM T. WOLF
United States Army

19990608 00

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### ARE WE DOING ENOUGH?

by

WILLIAM T. WOLF LTC, USA

### COLONEL PAUL J. CUNNINGHAM Project Advisor

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U.S. Army War College CARLISLE BARRACKS, PENNSYLVANIA 17013

### ABSTRACT

AUTHOR: William T. Wolf

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ARE WE DOING ENOUGH?

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In June of 1995, President Clinton issued Presidential

Decision Directive-39 (PDD-39), U.S. Policy on Counter-Terrorism.

This document set the stage for the most recent U.S. policy on

Combating Terrorism and identified for the first time the use of

biological weapons as Weapons of Mass Destruction (WMD). It also

established responsibilities within the government for fighting

this threat. "The United States shall give the highest priority

to developing effective capabilities to detect, prevent, defeat,

and manage the consequences of Nuclear, Biological, and Chemical

(NBC) materials or weapons use by terrorist." In February of

1998, in response to Iraqi non-compliance and threats to the

stability of the region, U.S. and allied forces deployed to the

SWA region. For the first time since the Gulf War, Americans

were directly faced with the possibility of biological weapons

usage.

iv

### TABLE OF CONTENTS

ABSTRACTii:
INTRODUCTION
BIOLOGICAL WARFARE
AN HISTORICAL PERSPECTIVE
U.S. GOVERNMENT POLICY
CONSEQUENCES1
RECOMMENDATIONS
ENDNOTES 2
BIBLIOGRAPHY2

# DOMESTIC BIOLOGICAL COUNTER-TERRORISM POLICY ARE WE DOING ENOUGH?

This is a CNN Special Report. This just in, the Center for Disease Control has just declared that an epidemic is widespread in Atlanta, Georgia. Doctors have not yet diagnosed the specific cause of the rampant disease, but the illness initially resembles a chest cold that progresses into pneumonia-like symptoms. It then progresses rapidly into fever and shortness of breath. What is especially peculiar about this epidemic is that all the patients who have sought medical attention attended the Atlanta Falcons football game two weeks ago at the Georgia Dome in downtown Atlanta. Authorities have asked that anyone who went to that game or has been in contact with these people seek immediate medical care if cold-like symptoms appear. Stay tuned to CNN for further developments on this story. Elsewhere in the news....

Biological Warfare (BW) is a topic of continued interest in the minds of the media and the American people because it is a very real threat to the domestic environment. The proliferation of biological weapons has been the primary catalyst to this interest. One of the major goals of the United Nations efforts in Iraq after the War has been to identify and destroy the Iraqi Nuclear, Chemical and Biological weapons programs. Since the end of the Gulf War, the United Nations Special Commission in Iraq (UNSCOM) has discovered that Iraq produced 19,000 litres of botulinum, 8,400 litres of anthrax, and 2,000 litres of aflotoxin and clostridium, all of which are significant biological threats.<sup>2</sup>

<sup>&</sup>quot;I have tried to set the right frame of mind in America for dealing with this," Clinton said. He conceded that in the past

the United States did not adequately address terrorist threats, he urged calm, saying the federal government was now doing everything it could to be prepared and prevent attacks. "This is not cause for panic," he said. "This is cause for serious, deliberate, disciplined, long-term concern." 3

President William J. Clinton, 1999

The President said these words during a speech he gave at the National Academy of Science on 22 January 1999, announcing a proposed \$1.5 Billion dollar program to combat biological, chemical and informational terrorism. This program would help guard the United States against a number of acknowledged terrorist threats. The question to ask ourselves may rightly be, is it enough?

Weapons of Massed Destruction (WMD) and the rise in terrorism today give Americans reason to be concerned. The threat of biological terrorism, long ignored, has now been heightened in recent years since events in Iraq, Japan, and Russia have come to light. The magnitude of the problem and the significant gravity of the current situation in this country have risen out of many recent events. These include, but are not limited to the discovery of a small pox outbreak in Europe during the 1970s, the arrest of the Japanese cult organization members, and their alleged involvement in production of biological agents. The recent revelation of the continued Russian involvement in offensive biological development also gives rise to concern.

Four major points of view have hindered serious development of a comprehensive biological defensive program. These include:

(1) Biological weapons have so seldom been deployed that logic would suggest they would not be used. (2) Biological weapons themselves are so repugnant that no one would ever use them.

(3) The science of producing enough organisms and then dispensing them is so difficult that it is out of the reach of only the most sophisticated scientists. (4) Much like the concept of a nuclear winter, the potential destructiveness of biological weapons is so horrendous that no one would attempt it. Each and every one of these arguments is flawed and without validity in today's

The continued concern of terrorist attacks in this country after the Olympic Park, the Trade Center bombings and the Oklahoma City tragedy has increased the need for an examination of our current policies. This Paper will seek to outline the current Administration policy in regards to this Biological threat and our Domestic response to it. I will also examine that policy and options for changes or modifications to that policy. Finally, I will endeavor to provide a reasonable recommendation for possible policy changes based on my analysis of the current program.

environment.

### BIOLOGICAL WARFARE

To completely understand the threat we face today, it is useful to understand more about the weapons involved. Biological weapons are any infectious agents such as bacteria or virus that are used intentionally to inflict harm upon others. This definition is sobering in its implications. Biological weapons are incredibly destructive. In the proper setting, they disperse, multiply, and mutate within an organism and can be highly contagious. High explosives, such as nuclear weapons, for all their horror, are identifiable and can be contained. In the same way, chemical weapons, for all their associated dread, become less lethal as they disperse and are diluted. In the same way as large explosions, they too can be contained and dealt with.

However, the biological weapons are insidious in their ability to hide and to remain lethal in even the smallest dosages. For example, botulinum toxin has been described as over one hundred thousand times more potent than the nerve agent, sarin, a deadly chemical agent. Even in the smallest microscopic amounts, biological agents can be extremely lethal. Anthrax, for instance can kill within three days and botulinum toxins destroy the cells of the lung wall and the victim expires within two to three days.

To fully understand these weapons and the threat they pose, it is useful to describe some of the main agents involved. These biological agents range from Anthrax to Viral Hemorrhagic Fevers, the Plague, Smallpox and Botulinum to name just a few. In all, hundreds, if not thousands of possible biological agents exist, but as possible weapons, only these five major agents are considered.<sup>7</sup>

ANTHRAX. Anthrax has been weaponized by several nations, including the U.S., so a great deal is known about it. It is also the first biological weapon in which the U.S. has immunized large numbers of soldiers. While it can be contracted through contact with the skin and through food, the most likely attack will be airborne. Anthrax spores are extremely hardy and remain lethal for extended periods of storage. Anthrax cells and spores dispersed via an aerosol, can inflict very heavy casualties on an unprotected population. If not treated with appropriate antibiotics soon after exposure, Anthrax can result in deaths in over 65 to 80 percent of the cases. \* In the first phase of the disease, nonspecific flu-like symptoms occur: mild fever, malaise, fatigue, muscle pain, dry cough, and at times chest pains. These symptoms can last from 24 hours to several days after exposure, followed by a period of no symptoms. The second phase of symptoms occurs quickly and lasts as little as 24 hours. The victim will develop shortness of breath, plunging blood

pressure followed by shock. Death can occur within 24 hours after phase two begins. It is estimated that if a hypothetical attack by Anthrax was carried out near a population center of 500,000 people, as many as 95,000 deaths might occur and 125,000 people would be incapacitated. A vaccine does exist, but so far has been very limited in it's availability to the general public.

BOTULINUM. Another deadly weapon is that of botulinum toxin. This toxin is considered the most toxic compound known requiring only one billionth of a gram for lethality. Best known as a food-borne disease, botulinum toxin can also be inhaled. The toxin blocks the neurological action required for respiration, thus the victim suffocates. Initially, the victim has a dry throat, dizziness, and blurred vision, vomiting, abdominal pain, and general weakness that can rapidly lead to total respiratory failure within as little as 24 hours. Experimental antitoxins are available in very small quantities and would not be useful in most advanced cases. 11

SMALLPOX. Another deadly biological agent is that of smallpox. Of all the agents, this one worries many researchers the most because of the ease of production and storage. By 1977, the last natural case of smallpox had been defeated and for the most part, no one has been vaccinated for smallpox since the mid-1970s. In fact, the lack of study in smallpox worries clinical physicians who are concerned with diagnosing the problem early on

before it spreads. In the case of small pox, the agent is again most likely airborne and the initial symptoms mirror other more common illnesses beginning in the lungs and travelling to the lymph system. Initially the victim may have a fever, headache, vomiting, rigors, and a malaise. After 2-3 days, a rash develops and lesions begin to form which eventually scab. With immediate care the lethality is lowered, however there is no cure. 12

PLAGUE. Plague has been studied as a weapon since the 1940s. The inhaled variety produces pneumonic plague and is extremely lethal. It begins with difficulty breathing caused by a severe infection of the air pockets in the lungs, typically marked by bloody sputum and a rapid deterioration. The inability to breathe is combined with a severe blood infection that can only be controlled if caught in the very early stages. Left untreated in the early stages, plague is universally lethal within 2-3 days. 13

HEMORAGIC FEVER. Hemoragic fever is a general name given to a variety of viruses that attack the blood vessels of the body. The most infamous of these viruses is the Ebola virus. Initially the victim would exhibit flu-like symptoms followed by massive internal hemorrhaging in the mucous membranes and organs. Shock followed by onset of a coma then death in over 90 percent of the cases. Therapy is available for only a few of the viruses. 14

### AN HISTORICAL PERSPECTIVE

To better understand the role of biological agents as weapons, it is useful to look at their usage in history. Since early-recorded time, biological agents have been used as weapons, at times with horrific results. In ancient Greece, rotting animal carcasses were thrown into enemy wells. In the Middle Ages, the most infamous act of biological warfare involved plague that resulted in a worldwide epidemic, known now as the Black Death. Over 20 million people in Europe alone died during the 14<sup>th</sup> century. The Tartar Army used the plaque to their advantage in the 14<sup>th</sup> century during their seize of Kaffe (in what is now Ukraine). Suffering great losses to the plaque during their siege, they catapulted corpses of their fallen comrades into the city. The city fell soon thereafter. 15

During the French and Indian Wars of the 18<sup>th</sup> century, the British used smallpox as a biological weapon. The British Commander, Sir Jeffrey Amherst gave the Indians loyal to the French, blankets infested with smallpox. The resulting epidemic decimated the Indian ranks. There is substantial evidence that in 1917 the German government inoculated American horses and cattle bound for France with glanders disease (an equine/cattle disease). The second seco

In more recent times, the Japanese conducted extensive biological efforts in Manchuria and during the China campaign.

In studies with Chinese prisoners the secret organization known as "Unit 731.0", the Japanese conducted extensive biological experiments. At the same time, at least eleven Chinese cities were attacked with plague infested fleas dropped by the Japanese. The attacks also featured contaminated food and water supplies. 18

Although the Germans never used biological weapons in WWII, they and the Allies conducted significant testing and development throughout the war. Bombing experiments conducted on an island off the English coast resulted in a quarantine of the island for over 40 years (Viable Anthrax spores persisted until the island was decontaminated in 1986). 19

The most recent episode of biological weapon usage was in the city of Sverdlovsk in the old Soviet Union in 1979. For over 15 years, the Russians denied any problems. However, in 1992 President Boris Yeltsin finally admitted to the accidental release of Anthrax spore from a test facility in the area. The final death toll may never be known, but it is estimated between 200 to 1,000 died.<sup>20</sup>

Finally, in 1984, salad bars in Oregon Restaurants were intentionally contaminated with Salmonella. It was proven later that the Rujneeshee Cult conducted the attack to try and influence an upcoming election in the local community. The incident resulted in 751 cases, of which 45 were hospitalized. Fortunately, no one died as a result of the attack.<sup>21</sup>

This is not a complete list of all biological attacks, however it serves to outline the historical significance of their use. There are untold other events throughout history that cannot be completely verified. During many times in history, the enemy used biological agents as weapons. For that reason alone, it is imperative that we be prepared.

### U.S. GOVERNMENT POLICY

Until 1970 the United States conducted extensive development and testing of offensive biological weapons. In 1970, President Nixon ordered a halt to all offensive biological weapon development. 22 In 1972, the United States became a signatory in the Biological Weapon Convention (BWC) and began total destruction of all offensive biological weapon stockpiles.23 At that time, there were only four nations known to possess biological weapons. Until most recently, the U.S. has relied on this convention as the framework of all biological disarmament and non-proliferation policy. Since 1972, the government has relied on a series of treaties and agreements to prevent proliferation and to advocate disarmament around the world. addition, the U.S. along with our allies imposed a series of sanctions and embargoes to force nations to comply with the BWC. Finally, the government imposed a series of export controls to insure goods and technologies were not transferred outside of the United States.24

This policy generally worked well until the mid to late 1980s as more and more nations attempted to attain any and all possible weapons (These nations included Syria, Libya, Iraq, Iran, and North Korea). Another major source of concern was the break-up of the Soviet Union and lack of control and safeguards upon their biological weapons stores and technology. In fact, the single Russian institute identified for research and testing of many of the worlds deadliest agents has gone from one of the most closely quarded facilities in the country to almost complete abandonment. A very real problem is the scientists themselves once the breakup of the old Soviet system was complete. As the new Russian government tried to get a hold on the economy and the infrastructure many scientist went unpaid for years. As a result it is feared that renegade countries such as Iran and Iraq have recruited a large number. 25 In 1989, Congress passed the Biological Weapons Act (BWA) which was the first direct effort by the government to protect this country from biological attack. The key provisions of the act define as a federal crime as the development, manufacture, transfer, or possessions of any biological agent, toxin, or delivery system for use as a weapon (or knowledge thereof).<sup>26</sup>

However, in light of the February 1993 World Trade Center bombing coupled with the 1995 Oklahoma City bombing, the specter of terrorism at home hit the American people. As Federal Bureau

of Investigation (FBI) data showed to Congress, the number of terrorist acts dropped as we entered the 1990s. However, the lethality of those acts increased. Specifically, 1996 terrorist incidents were some of the lowest on record, but conversely the deadliest. These two incidents in the period of two years coupled with the June 1996 bombing of the barracks in Saudi Arabia woke the American people to the serious threat of terrorism. As separate incidents in Japan (subway attack with Sarin in 1995) along with the continued poor reports from UNSCOM of the Iraqi biological weapon stockpile and production served as a wake up call to the United States.

In June of 1995, President Clinton issued Presidential Decision Directive-39 (PDD-39), U.S. Policy on Counter-Terrorism. This document set the stage for the most recent U.S. policy on Combating Terrorism and for the first time identified biological weapons as Weapons of Mass Destruction (WMD). It also established responsibilities within the government for fighting this threat. "The United States shall give the highest priority to developing effective capabilities to detect, prevent, defeat, and manage the consequences of Nuclear, Biological, and Chemical (NBC) materials or weapons use by terrorist." <sup>28</sup> In February of 1998, in response to Iraqi non-compliance and threats to the stability of the region, U.S. and allied forces deployed to the Southwest Asia (SWA) region. For the first time since the Gulf

War, Americans were directly faced with the possibility of biological weapons usage. As a result of this deployment, soldiers, sailors, and airmen deployed to the region were inoculated against the Anthrax virus.

In May of 1998, President Clinton again issued a PDD on Counter-Terrorism(PDD-62, Combating Terrorism and PDD-63, Critical Infrastructure Protection Directive). Both directives further refined the U.S. policy regarding the nation's defense against emerging unconventional threats. Page A major portion of the directive(PDD-62) discussed the threat of biological weapons. In addition, in 1996, Congress passed the Anti-Terrorism Act to provide the federal government with additional tools in the war against domestic terrorism. In simple terms, the act provided law enforcement personnel broad authority and powers to deal with terrorism in the United States. 30

The threat outlined here and addressed by this legislation and Presidential directive has been heightened by the recent bombings of United States Embassies in Kenya and Tanzania, and our retaliatory strike against a Pharmaceutical Plant in Sudan and the Afghan Headquarters of terrorist, Osama Bin Laden. As the scenario outlined in the beginning of this paper, the threat is very real and will not go away as long as terrorist groups exist.

All three policy directives follow the general guidelines outlined in the National Security Strategy (NSS) of 1997 and 1998. As stated in the NSS, "U.S. counter-terrorism approaches are meant to prevent, disrupt, and defeat terrorist operations" ...., in addition, "countering terrorism effectively requires day-today coordination within the U.S. Government...." 32 This effectively identifies the end state of the National policy concerning counter-terrorism, and specifically in this case, Biological Counter-terrorism. That is to defeat the threat posed by biological terrorism and safeguard the American People. Presidential Decision Directives (PDD-39, PDD-62, and PDD63), outline several specific ways and means to accomplish this strategy. These include among other things: increased funding for research, the establishment of responsibilities at the federal level, and the increased training efforts for National Guard and selected local personnel. In addition, the Administration has sent budget requests to Congress in FY 98, totaling an "additional \$294 million to deter and respond to terrorist incidents involving the use of biological or chemical weapons." 33

In addition to the budget requests, PDD-62, the Combating Terrorism directive, "details a new and systemic national approach to fighting terrorism by bringing a program management approach to the U.S. counter-terrorism efforts." <sup>34</sup> It also

establishes a National Director or Czar to direct counterterrorism activities. The current director is Mr. Richard Clark.
His responsibilities include "integrating all government
policies and programs on unconventional threats to the United
States and Americans abroad". The administration has also
outlined the responsibilities of all the appropriate Federal
Agencies in these PDD's, including: the Department of Justice
(DOJ), the Department of State(DOS), the Department of Health and
Human Services(HHS), the National Institute of Health(NIH), and
the Federal Emergency Management Agency (FEMA) as well as
others. 36

Finally, the Congress passed the 1996 Defense Against
Weapons of Mass Destruction Act (also known as the Nunn-LugarDomenici Legislation). This act directed the Federal Government
to undertake an assessment appraisal of the threat and to adopt
programs and other efforts to enhance local and state
capabilities to fight this threat.<sup>37</sup> All of these efforts,
including the President's most recent request for an additional
\$2.8 Billion dollar program to further enhance the government
programs have sought to address the biological terrorist threat.<sup>38</sup>
Unfortunately, there are still flaws in the federal efforts.
According to former Senator Sam Nunn more must be done.

"Every sort of exercise that has been run shows that the second set of victims are the police, firemen, and health personnel who rush into an area. They don't have the detection equipment... They don't have protective equipment, and they don't have the training to deal with a situation like this (a Biological Warfare Attack)." 39

Former Senator Sam Nunn, D-GA

### CONSEQUENCES

Although Senator Nunn was one of the first government leaders to voice concern about the biological threat, he and other experts in the field continue see problems in our response. Our efforts to this point have been focused on the federal and state level of response, predominantly. Although some limited training is under way for selected response personnel in major metropolitan cities, the efforts are not enough.

Because of the nature of the biological threat, it is not enough to train response teams; the first response will be at the local level where little to no preparation has been initiated. 40 Medical personnel must be trained as well. They must be able to recognize the symptoms of diseases they have probably only read about in textbooks. 41 In addition, the ability of local health officials to access the state or federal information on a given disease is extremely poor. In fact, a study done in 1992

concluded "most state and local health departments had fallen below a critical threshold in terms of staff and equipment and are unable to efficiently deal with naturally occurring disease outbreaks." <sup>42</sup> The President has promised money for upgrading the local health system, however it totals less than \$42 million dollars and has not yet made it out of Congress. <sup>43</sup> Dr. Donald Henderson, an expert in the field of health care, is Dean Emeritus of the John Hopkins School of Public Health and a one-time director of the World Health Organizations campaign to eradicate smallpox. He says \$42 Million dollars " is a very small amount of money...it would take about \$1 Billion dollars to upgrade the public health system to prepare for a possible epidemic caused by terrorist". <sup>44</sup>

Dr. Bill Patrick, an Internationally recognized expert in Biological Terrorism, states that the threat continues to be real and even the so-called hardened sites such as the Pentagon or overseas embassies are very vulnerable to biological attack. This points to the problem of crisis response to the threat. Biological Terrorism, by nature, can be conducted without anyone knowing. In other words, the threat may not be perceived until a local physician sees the first victim. It is here time is critical and a correct diagnosis is so important. Although a great deal of money has been devoted to many of the supporting characters in this problem, the independent hospitals,

physicians, and emergency response personnel are the ones that will make a difference. 46 That difference could be the distinction between a localized health problem and a full-blown epidemic with all the associated panic it will entail.

Another problem area is the lack of a cohesive command and control structure. The National Coordinator is without a clear mandate and has no budgetary or legal authority to truly coordinate the nation's C-T effort. This allows agencies such as FEMA, the FBI and DOD to submit separate budget requirements and align their efforts to suit their partisan agendas.<sup>47</sup> Efforts have been made to designate a Military Combatant Headquarters as the CINCUSA.<sup>48</sup> This effort could consolidate the loose efforts currently being conducted and place one single commander with a staff and resources in charge of the mission.

### RECOMMENDATIONS

Since the signing of the BWA in 1972, the United States has made efforts to limit the proliferation of Biological Agents. It was through our own offensive program that we learned the potentially devastating nature of Biological agents. Since Desert Storm and in the aftermath of UNSCOM inspections, the United States and many of our allies have sought tighter controls on these devastating agents. The BWC attempted to do that through the international community. However, as we enter the

21<sup>st</sup> Century, we face the ever-increasing threat of terrorism at home. Terrorists have many weapons at their disposal, but biological weapons carry a special characteristic and quality about them. They are easy to make, transport and disseminate. Unlike the use of nuclear or Chemical weapons, the terrorist can commit the attack and then be long gone before the first victim falls ill. Because of the historical significance of the agents and the understanding of the lethality of these weapons, the federal government has attempted through a series of directives and Congressional laws and funding programs to address the issue. Unfortunately, as can be seen, not enough has been done.

As outlined in this study, the administration's Biological Warfare Counter-Terrorism policy is lacking some significant cohesion and direction.

First, the National Coordinator must have statutory authority over the coordination of policy and the budgetary responsibility to determine, request, and allocate the necessary budget requirements. Mr. Clarke, the designated National Coordinator for counter-terrorism activities is without the necessary authority and ability to fully do his job as the national coordinator. His responsibilities include "integrating all government policies and programs on unconventional threats to the United States and Americans abroad". <sup>50</sup> Unfortunately, he has no budgetary responsibility and cannot therefore address the

problem in a coordinated effort. The establishment of a CINCUSA, responsible for Homeland Defense with the necessary staffing and budget authority may be the better solution for this challenging area of National Defense. President Clinton called this option the "last big kind of organizational piece...in strengthening the nation's defenses against new kinds of terrorism. 51

Secondly, the efforts to train local authorities to respond to the initial threat must be increased and coordinated. The requirement to address the Biological consequences must be met early and completely; the local authorities are the best force to conduct this effort. The effort to train the local response teams are fine, but must be increased to include all local health representatives. These efforts should start in the schoolhouse where physicians, nurses and emergency responders are initially trained. The Study of epidemic diseases and identification, diagnosis, and treatment of biological diseases should be reinvigorated at all levels of health-care training.

"The responsibility for recognizing an unusual outbreak of illness that may be the result of a deliberate release of biologic warfare agent will fall on the health care community.

Early recognition will be an important factor in determining the overall outcome and will depend on the level of suspicion and

knowledge of the health care providers that see the initial cases."52

Dr. Phillip K. Russell, John Hopkins University

The rapid response from state and local laboratories with help from federal agencies may be the most critical element.

These efforts can be eased by the use of additional military (National Guard or Active-Duty Medical units) that can train local responders across the country. While the Federal Emergency Management Agency (FEMA) has the overall lead in Consequence Management, following an incident, it will be the level of preparedness at all levels that determines incident success or failure. 53

Local First Responders should be equipped with the adequate detection and protective equipment. Federal and State reponse teams will be adequately equipped, but as can be imagined the first responders must address the problem and should be adequately equipped and prepared. The first responders should be equipped with portable, user-friendly systems for detecting and identifying the biological agents. In addition, the protective gear that can currently be found only in specially trained units should be provided to local first response teams.

Public Health Service and the Food and Drug Administration must insure that adequate supply of all necessary antibiotics and

useful vaccines are available on a local basis. Currently, most antibiotics are controlled at the federal level and in the case of some vaccines are only in the experimental quantities for very limited usage. This must change. If the Federal government is to provide support to local first responders and to address the health implications of an epidemic, the tools must be made available to local health officials.

Finally, it should be remembered that much has been done. But in answer to the question I raised early on; is it enough? Much more needs to be done. Terrorist are a known threat, and biological agents are definitely a likely weapon. Therefore everything we can do as a nation must be done to protect our citizens. In the early 1960s, Herman Kahn wrote a book about the spectacle of fighting a nuclear war entitled Thinking About the Unthinkable. By improving our ability to respond at the local and federal level we will save lives. We must endeavor to do it right.

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